

REMARKS

Claims 1-25 are pending in this case. All of these claims 1-25 stand rejected. Claim 25 is rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,480,205 to Greene et al. (hereinafter Greene). Claims 1-4, 8-11, 23 and 24 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,923,322 to Izawa in view of Greene. Claims 5-7 and 12-14 are rejected under 35 U.S.C. §103(a) as being unpatentable over Izawa in view of Greene and further in view of U.S. Patent No. 5,509,110 to Latham. Claims 15 and 16 are rejected under 35 U.S.C. §103(a) as being unpatentable over Latham in view of Izawa.

In response to the Office Action, Applicants have amended independent claims 1, 8, 15, 17, 23, 24, and 25. Additionally, Applicants have amended dependent claims 5, 9, 10, 11, 16, 18, 19, and 22 to clarify the invention. Applicants have added new dependent claims 26-31. Applicants have amended the Abstract to remove extraneous statements. No new matter has been added. In view of the foregoing amendments and the following remarks, Applicant hereby respectfully requests reconsideration of the Application.

Rejection Under 35 U.S.C. §102(e)

In the Office Action, claim 25 is rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,480,205 to Greene. Applicants respectfully traverse this rejection.

Applicants have amended independent claim 25 to recite “dividing the primitive object into areas in an (x,y) space, the areas delimited by splits, each split defined by an analytical function, each area defined by a piece of a piecewise function, each piece of the piecewise function representing depth information for the area of the primitive object”. In contrast, Greene does not disclose a piecewise function in which each piece of the piecewise function defines an area in an (x,y) space. Instead, Green discloses finding a tile that encloses a polygon and computing equations for polygons enclosed by the tile (Col. 13, lines 49-51). Accordingly, Greene does not expressly or inherently disclose all elements of

claim 25 and thus does not anticipate claim 25. Applicants assert that the rejection of claim 25 under 35 U.S.C. §102(e) is fully overcome, and that claim 25 is now in condition for allowance.

Rejection Under 35 U.S.C. §103(a)

In the Office Action, claims 1-4, 8-11, 23 and 24 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,923,322 to Izawa in view of Greene. Claims 5-7 and 12-14 are rejected under 35 U.S.C. §103(a) as being unpatentable over Izawa in view of Greene and further in view of U.S. Patent No. 5,509,110 to Latham. Claims 15 and 16 are rejected under 35 U.S.C. §103(a) as being unpatentable over Latham in view of Izawa. Claims 17-22 are rejected under 35 U.S.C. §103(a) as being unpatentable over Greene in view of Latham and further in view of Izawa. Applicants respectfully traverse these rejections.

Applications have amended independent claims 1, 8, 15, 17, 23, and 24 to recite a piecewise function in which each piece of the piecewise function defines an area in an (x,y) space and represents depth information for that area. Greene, Izawa and Latham, either individually or in any combination, do not teach or suggest a piecewise function in which each piece of the piecewise function defines an area in an (x,y) space and represents depth information for that area.

Neither Greene nor Latham teaches or suggests a piecewise function in which each piece of the piecewise function defines an area in an (x,y) space and represents depth information for that area. Izawa discloses dividing a Z axis into a plurality of segments corresponding to a plurality of spaces (Col. 5, lines 3-9; and Col. 6, lines 15-26). As disclosed in Izawa, Z values within a space are used to generate an equation that is used to convert viewpoint coordinates to perspective coordinates for the space (Col. 5, lines 3-9; and Col. 6, lines 15-26). The space disclosed in Izawa is a three-dimensional volume defined by clipping planes (Fig. 1; Col. 6, lines 27-51). In contrast to the equations disclosed in Izawa, a piece of the piecewise function as now recited in amended claims 1, 8, 15, 17, 23, and 24 defines an area in an (x,y) space that is a two-dimensional area in an X-Y plane (FIGS. 3A and 3B). Further, as recited in amended claims 1, 8, 15, 17, 23, and 24, a piece of the piecewise function represents depth information

for the area defined by that piece. Accordingly, Izawa does not teach or suggest a piecewise function in which each piece of the piecewise function defines an area in an (x,y) space and represents depth information for that area, as is now recited in amended claims 1, 8, 15, 17, 23, and 24.

Applicants further assert that the function of converting viewpoint coordinates to perspective coordinates as disclosed for the equations in Izawa is fundamentally different than the function of representing depth information by a piecewise function as recited in amended claims 1, 8, 15, 17, 23 and 24. Therefore, it would not have been obvious to one skilled in art would to combine the teachings of Izawa with Greene and Latham, either individually or in combination, to represent depth information by a piecewise function as recited in amended claims 1, 8, 15, 17, 23 and 24, nor would one skilled in the art be motivated to do so.

For the above reasons, Applicants assert that the rejection of independent claims 1, 8, 15, 17, 23, and 24 under 35 U.S.C. §103(a) is fully overcome and that each of the independent claims 1, 8, 15, 17, 23 and 24 is now in condition for allowance. Claims 2-7 depend from claim 1 and are allowable for at least the same reasons set forth above for claim 1. Claims 9-14 depended from claim 8 and are allowable for at least the same reasons set forth above for claim 8. Claim 16 depend from claim 15 and is allowable for at least the same reasons set forth above for claim 15. Claims 18-22 depend from claim 17 and are allowable for at least the same reasons set forth above for claim 17.

CONCLUSION

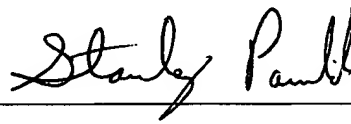
In view of the above remarks, Applicants believe that the rejections in the Office Action are fully overcome, and the application is in condition for allowance. The Examiner is invited to call Applicants' representative at the number below if he has any questions or if there are remaining outstanding issues.

Respectfully submitted,

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By: _____



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